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NAEP

PROFILES OF LITERACY

AN ASSESSMENT OF YOUNG ADULTS

DEVELOPMENT PLAN

April 1985

U.S. DEPARTMENT OF EDUCATION
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This paper was supported by the National Institute of Education under Grant No. NIE-G-84-0013. The points of view or opinions expressed are those of the author and do not necessarily represent the position of the National Institute of Education.

TM 850 683

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DOCUMENT RESUME

ED 263 192 TM 850 683

AUTHOR Kirsch, Irwin
TITLE NAEP Profiles of Literacy. An Assessment of Young Adults. Development Plan, April 1985.
INSTITUTION National Assessment of Educational Progress, Princeton, NJ.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Apr 85
GRANT NIE-G-84-0013
NOTE 22p.; For a related document, see TM 850 684.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adult Literacy; Basic Skills; Data Collection; *Educational Assessment; Evaluation Criteria; *Literacy; National Surveys; Questionnaires; Reading; Secondary Education; Student Evaluation; Writing Evaluation; *Young Adults
IDENTIFIERS *National Assessment of Educational Progress

ABSTRACT

The National Assessment of Educational Progress (NAEP) has acted to provide a new perspective with its 1985 survey of the literacy skills of young Americans aged 21-25. In the Spring of 1985, NAEP began screening 40,000 households to identify a nationally representative sample of between 3,600 and 5,000 young adults aged 21-25 and several hundred out-of-school 17-year-olds. (An oversampling of Black and Hispanic young adults will permit NAEP to deliver reliable reports on those groups.) We can fully appreciate the conditions of literacy among young adults in our society only when we survey their proficiency at various tasks along with the characteristics of the backgrounds and the environments in which they live. NAEP staff members will gather information on the background and demographic characteristics of young adults. A second phase of the study involves the measurement of "core" skills, and a third phase includes simulation tasks resulting in a profile of literacy skills or an oral language interview. Findings of the study will have implications for economic development, educational programs, and practical programs to improve literacy. (LMO)

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INTRODUCTION

Reading and writing skills provide people with an efficient means for accomplishing many tasks, whether they are associated with performing on the job or managing a household. These skills also enable individuals to learn new skills and acquire information about current events, consumer affairs and to improve the quality of their lives. Most importantly, literacy skills are basic to self-directed lifelong learning. Learning skills are particularly important in a technologically advancing society where new forms of written documents are emerging, new strategies for coping with them are expected, and jobs and job requirements are changing rapidly.

Despite the dramatic increases in spending for education in recent years, concern is growing among educators, employers, and citizens over the ability of high school graduates to find, hold and achieve in a job. These concerns arise for several reasons. For one thing, it is widely held that large numbers of secondary school students leave high school lacking basic skills. According to one recent report (Lerner, 1981), 12.6% of students leaving high school are "functionally illiterate". Among Blacks these rates are estimated to approach 40% (Lerner, 1981). In addition, whatever the appropriate interpretation, standardized test results indicate that between 15% and 30% of 12th graders read below the ninth grade level (Fisher, 1978). In 1980 the Armed Services Vocational Aptitude Battery was administered to a nationally representative sample of 18 to 23-year-olds (Office of the Assistant Secretary of Defense, 1982). The median reading score for this national sample was reported at a 9.6 grade level. More than 4.5 million people, or 18% of this age group, were estimated to have reading scores below the 7th grade level. Compounding this problem of low achievement and "functional illiteracy" is the

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number of students leaving high school before graduation. More than 800,000 students are estimated to drop out each year with Blacks and Hispanics having significantly higher rates than whites (Statistical Abstracts of the United States, 1983).

Concerns over apparent skill deficiencies come at a time when the nature of work is changing. The continued shift in our society from manufacturing to an information/service job market combined with increased foreign competition and accelerating technological change has made literacy skills increasingly important for more and more workers. While the Bureau of Labor Statistics (1982) estimates that there will be large numbers of low skill jobs in health, custodial, and labor fields, those individuals wishing to escape from the low wages and intermittent unemployment associated with these occupations will need additional literacy skills. Economist Eli Ginzberg (1980) points out that education and training not available at work are now required for placement in most technical, managerial, and professional service-sector jobs. Mikulecky (1982), in studying a variety of occupations, reported that over 80% of literacy tasks observed required workers to go beyond literal level skills. In fact, problem solving, use of judgment, and analysis of situations were reported to be more common requirements on the job than in schools. The National Academy of Science and Engineering and the Institute of Medicine (1984), in their joint report, said, "The continual evolution of work functions will require that workers master new knowledge and new skills throughout their working lives. The ability to learn will be the essential hallmark of the successful employee."

Moreover, demographic shifts will produce significant changes in both the number and make-up of the groups expected to enter the job market over the next 20 years. In 1980, there were an estimated 30.3 million 18-24-year-olds

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who comprised the primary entrants into the labor market. By 1990 it is projected that this number will shrink to approximately 25.8 million. While the total of new labor force entrants in this age range will decline, minorities will comprise a greater proportion of all entry level workers (National Council on Employment Policy, 1984).

Within this economic and social context, President Reagan announced on September 7, 1983 that the federal government was joining with other public and private groups in a nationwide Adult Literacy Initiative. As part of that initiative, the National Assessment of Educational Progress (NAEP) received funding to conduct a literacy assessment of young adults.

NAEP's sixteen years of assessment experience make it the ideal vehicle for conducting the Young Adult Literacy survey. Its data bank from previous assessments allows comparison of this new age cohort with the 17-year-old population that has been assessed regularly. Further, the Young Adult Literacy assessment returns NAEP to an important part of its original mandate, viz., the collection of data about young adults. Information obtained from this assessment will be used to establish a baseline from which trends can be plotted over time.

NAEP's decision to focus its attention on our country's 20 million young adults aged 21-25 is based on the knowledge that they comprise a quarter of the nation's work force and the highest proportion of unemployed. Also, they are at a point in life where they must secure a place in the employment world, even harder to do for those ill prepared for a technologically advancing society.

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PURPOSE

In the Spring of 1985, the National Assessment of Educational Progress (NAEP) will begin screening 40,000 households in an effort to assess between 3,600 and 5,000 young adults aged 21-25 as well as several hundred out of school 17-year-olds. An oversampling of Blacks and Hispanics will permit reliable analyses for these groups. The purpose of the assessment is to collect data that will enable us to better understand the nature and extent of literacy problems facing America's young adults. At issue is how to define and assess literacy within this diverse population.

In order to respond to the various points of view, interests, and priorities confronting educators and policy planners, NAEP's assessments are based on goals developed through a consensus process involving experts in the field representing various points of view throughout the nation. Expertise was drawn from persons in government, business, industry, education, and national defense. A series of four panel meetings plus outside reviews conducted between April and October 1984 resulted in the definition of literacy and assessment plan that is presented here.

DEFINING LITERACY

Literacy as defined here is: "Using printed and written information to function in society, to achieve one's goals and to develop one's knowledge and potential."

In the intensive discussions among conference participants, several issues surfaced that led to the drafting of this definition and the assessment plan that is presented here. Foremost among these is the conception of

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literacy not simply as a set of isolated skills associated with reading and writing but as the application of those skills for specific purposes in specific contexts.

When literacy is studied within social contexts, diversity becomes its hallmark. First, people engage in literacy behaviors for a variety of uses or purposes (Cook-Gumperz and Gumperz, 1981; Heath, 1980; Mikulecky, 1982; Sticht, 1978). These uses may vary across contexts such as school, work, and community (Heath 1981; Venezky 1983) and among people within the same context (Kirsch & Guthrie, 1984). This variation in uses leads to an interaction with a broad range of materials that require the use of qualitatively different linguistic forms (Diehl, 1980; Jacob, 1982; Miller, 1982). In some cases, these different types of literacy tasks have been associated with different cognitive strategies or reading behaviors (Crandall, 1981; Kirsch & Guthrie, 1984; Scribner & Cole, 1981; Sticht, 1982).

Given the complexity and diversity among literacy tasks, panel participants readily agreed that individuals cannot easily be categorized as either "literate" or "illiterate". There is no single measure or specific point on a scale that separates the "literate" from the "illiterate". Literacy can no longer be defined simply as the ability to sign one's name, completion of a particular year of schooling, or attainment of a specified reading grade level. Within our society, the wide array of activities is likely to require different types of literacy for successful performance. Because of the broad diversity of literacy demands people encounter at home, work, and school, a major goal of this assessment is to profile the literacy skills among young adults—the skills that many respondents have acquired and those skills that many lack.

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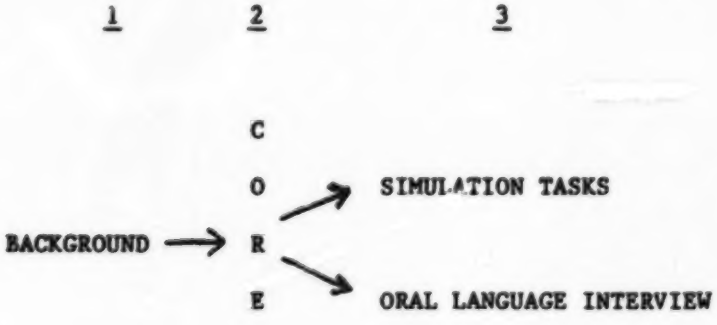
Although this survey of literacy is necessarily anchored in the assessment of reading and writing, in reality, literacy skills are seldom used in isolation. Rather, they are frequently used in a broader context of processing information. Speaking, listening, and basic mathematics were judged to be sufficiently integrated with the use of reading and writing in real-life contexts to require some attention in the assessment.

Together, this set of issues formed the framework that was used to develop the assessment plan as well as specific assessment items. Careful consideration was given to the results of prior assessments, extant literature, and the expressed needs and concerns of policy and decision makers. Also, as can be seen in the following assessment plan, further recognition is given to the social bases of literacy through the collection of extensive background information.

LITERACY ASSESSMENT PLAN

The resulting model for the administration of the literacy assessment consists of the following four components. A detailed discussion of each follows.



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Background & attitude questionnaire. From the beginning, the panel members stressed the importance of collecting background information. The importance of this information is demonstrated by the fact that 30 of the 90 minutes allotted for individual data collection are allocated to the background questionnaire. The questions developed for this survey serve not only to characterize the young adult population (21-25) in terms of demographics but to provide a better understanding of the factors that we expect to relate to the observed distribution of skills. For organizational purposes, the survey questions are listed here under five topics that have received attention in the literature and that are likely to have implications for future educational planning/decision making.

1. Characterizing the Population

   Any attempt to understand how literacy skills are distributed must take into account the variance that exists among this population in race, sex, home environment, and so forth. In addition, gathering this information is crucial to our understanding of how such differences are related to educational attainment, skill acquisition, job status and literacy practices.

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A. Family Background

- o where parents were born
- o age of parents
- o parents' educational attainment
- o parents' occupation
- o home environment
  - language(s) spoken in the home
  - availability of literacy materials
  - size of household

B. Demographics

- o where and when respondent was born
- o ethnicity
- o size of current household
- o personal and household income
- o occupational status

2. Literacy and the Schools

Concerns about literacy rates have predictably centered on the schools. Several published reports have focused on the diminishing abilities and skill achievements of high school graduates and to a lesser extent on the plight of dropouts and pushed-out graduates.

Critics have voiced their concerns over the apparent mismatch between the literacy skills and demands required in school and those associated with an individual's work, home, and community. While this survey will

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not attempt to determine the effectiveness of literacy instruction, respondents will be asked questions regarding the amount and kinds of education/training they have received in addition to its perceived adequacy and the barriers that were encountered.

A. Educational Attainment

- o grade completed or aspirations
- o grade completed in native country
- o types and durations of training received in addition to public school
- o open probes into reasons not completing high school or not receiving formal schooling

B. Educational Barriers

- o Diagnosed condition that may have interrupted or interfered with learning
- o English as a second language
  - Language(s) acquired before starting school
  - when English was learned
  - Language usually spoken now
  - frequency and contexts for using non-English Language
  - perceived facility in English

C. Educational Evaluation

- o overall rating of high school and elementary school
- o perceived adequacy of education for current reading and writing tasks

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3. Literacy and Work

Within a technologically advancing society, it is widely recognized that academic preparation is not just for the college bound. Nevertheless, persons entering the workforce directly from high school need many of the same skills and knowledge as those going on to college. Although some entry level jobs may not require higher-level competency, business and industry leaders emphasize that without them, employees will not be able to move ahead and gain promotions.

- o Literacy demands at work
- o Adequacy of current skills for work
- o Perceived utility of literacy skills for job advancement
- o Expectations for obtaining further training
- o Expectations for who is likely to pay for this training

4. Literacy and Home/Community

The value of literacy in today's society has been well documented. People need to be able to read and write to accomplish important tasks not only for work and school but in the home and community as well. Literacy skills are important in maintaining a household as well as being an active and responsible citizen.

- o Participation in formal organizations
- o Political involvement
- o Free time activities
- o Frequency with which one provides or receives assistance with particular tasks

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5. Reading Practices

Recent studies have increased our awareness that literacy is deeply embedded in the the social contexts in which it is practiced. The complexity of social contexts and personal expectations lead to a broad range of literacy behaviors.

- o Topics and content read from newspapers, magazines, books and brief documents
- o Frequenc, and time associated with reading and writing various materials
- o Determining whether a particular literacy practice is for work, school or leisure

Core. The second component of the literacy assessment is the "core." This set of nine tasks serves two important functions. The first is to map the changing definitions of literacy. Historians have noted that as our society expanded so did our definitions and standards for literacy. As Daniel and Lauren Resnick (1977) point out, literacy in its earliest form consisted of little more than signing one's name. It was not until much later that students were expected to become fluent oral readers and not until this century that reading to gain information was given primary emphasis. To reflect these changing standards, respondents in NAEP's young adult assessment are asked to demonstrate their skill in signing their name; reading a simple passage aloud; answering literal questions after reading a short passage; and responding to several "practical" tasks. These include tasks involving: a driver's license, a medicine label, traffic and street signs and a notice about a trip.

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These core items also serve a locator function in this assessment. Responses to this set of items will guide the movement of the respondent into the third phase of the assessment. Persons who encounter considerable difficulty in completing the core and, therefore, can be expected to be frustrated by the "simulation tasks" will be asked to respond to an "oral language interview." Those persons who are able to complete the core tasks with relatively little difficulty will be administered a set of simulation tasks.

Simulation Tasks. In developing and selecting tasks for inclusion in the assessment primary emphasis was placed on representing the broad range of literacy behaviors people frequently encounter in occupational, social and educational settings. To assist in determining the nature of such tasks, lists of current objectives in competency-based adult programs, existing literacy measures, and studies of literacy in various contexts were reviewed.

The organizing framework that emerged for item development took a multi-dimensional approach to literacy tasks. Under that approach, a task is built upon the setting in which the behavior is performed, the document or printed material read, and the use or purpose which the reader brings to the material. It is argued that the interaction between use and material operationally defines a reading task and determines the processing demands required for successful performance (Kirsch & Guthrie, 1980; Pearson & Johnson, 1978).

Material refers to the linguistic form in which the information is displayed. Thirteen such categories are included. These are: sign/label, directions, memo-form, table, graph, prose, index/reference, notice, schematic or diagram, advertisement, bill/invoice, and regulation.

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Use refers to why the individuals engage in the task, i.e., the type of information they need or are seeking. This is believed to influence both a person's strategy and cognitive operations a in completing the task. Five categories of use, reflecting various levels of processing, are included: knowledge, evaluation, specific information, social interaction and application.

These are operationally defined in this study as follows:

- o Knowledge: reading to integrate information, to remember sets of facts for later use, or to go beyond information given
- o Evaluation: compare and contrast points of view; use printed information to make a reasoned judgment
- o Specific Information: location of a specific fact to satisfy a particular need (e.g., looking up a fact in a reference book)
- o Social Interaction: organizing and sequencing information to communicate to another person or group (e.g., prepare a memo, write a letter, orally explain something that is read)
- o Application: Following oral/written instructions, to construct, make, or repair something; do simple calculations based on printed information; provide simple facts such as in the completion of forms.

The thirteen material and five use categories permit a diverse range of literacy behaviors. These are shown in the table that follows along with the behaviors that will be measured.

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MATERIAL X USE

USE

MATERIAL	Knowledge	Evaluation	Specific Information	Social Interaction	Application
Sign/Label			x		x
Directions					x
Memo		x		x	
Form			x		x
Table	x	x	x	x	x
Graph	x	x	x		
Prose	x	x	x	x	
Index/Reference			x		
Notice			x		x
Schematic			x	x	x
Ad			x		
Bills			x		x
Regulation			x		

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Given the committee's recognition that reading and writing tasks generally do not occur in isolation but rather in social contexts, it was felt that simulations of the skills in context rather than traditional multiple-choice questions would provide a more valid and useful assessment of literacy competencies.

Efforts were undertaken to create assessment materials that would address these concerns. For example, NAEP printed a 4-page newspaper containing a selection of articles selected from national newspapers. Respondents are asked to summarize arguments from an editorial, to locate specific information in a news story, to orally explain what they read, and to look up information in a TV listing as well as on the classified page.

Respondents are also provided with a World Almanac and are asked to use the index to find and extract various kinds of information. Another task involves looking at a credit card bill and writing a letter explaining that an error in billing has been made. The respondents are also asked to write a short interpretation of a poem, to fill out a job application, to use a check ledger to enter and compute a running balance, to use information from a catalogue to complete an order form, to use information to select flights for people arriving from different cities to attend a conference, to read and understand stories, and much more.

In addition to these tasks, items from The National Assessment of Educational Progress' 1983-84 reading and writing assessment were selected for inclusion. These are primarily multiple-choice questions and reflect a range of behaviors typically associated with school achievement. This set of NAEP items will allow important questions to be addressed. For example, how does the literacy performance of young adults compare with that of in-school 17-year-olds? Also, what is the relationship between literacy as assessed by

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these simulation tasks and traditional multiple-choice tasks? Answers to these questions have important implications for the development and evaluation of "second chance" education and training programs.

Oral Language Interview. The oral language interview will be used with two populations: young adults who cannot perform the basic reading and writing tasks contained in the "core" and a random subsample of young adults (200) who can perform these basic tasks. In Some limited-English speakers are expected in both groups.

The oral language interview is divided into two parts. Part I contains 7 tasks and is designed to answer the following questions:

- Are individuals who cannot perform basic reading and writing tasks able to function effectively using spoken English?
- Are those individuals who can perform basic reading and writing tasks able to function effectively using spoken English?
- What are the characteristics of persons who are high and low performers using spoken English?

Part II of the oral language interview is concerned with gauging respondents' familiarity with types of literacy materials. A set of 20 documents or types of literacy materials are contained on hand-out cards. The interviewer is instructed to show them to the respondent one at a time. For each, the respondent will be asked to describe: what the literacy material is; where it is found or what it is used for; the respondent's need to use this type of information; and the extent to which the respondent seeks assistance in using it.

The 20 documents include: street signs, a credit card bill, a prescription for medicine, a driver's license, a food advertisement, a job

18 BEST COPY AVAILABLE

application, a unit price label, a poem, a prose passage, a newspaper article, a page from classified section of newspaper, a page from yellow pages, a book index, a personal letter, a street map, a recipe, a bus schedule, a wage and tax statement and a deposit slip.

SUMMARY

The model for the adult literacy assessment is based on the theoretical position that literacy is inseparable from the social contexts in which it occurs. To gain a better and deeper understanding of the condition of literacy among young adults in our society, it follows that we cannot assess these skills independent of background and environmental variables.

As a result, the operational plan for the assessment calls for an unusually broad and varied range of activities that together will provide a rich data base for better addressing literacy issues confronting American education. An extensive background questionnaire will provide information about the kind of environment the interviewee grew up in, and his or her early language experiences, education and training received, occupational status and aspirations, current reading and writing practices, and involvement in the community. This information will provide a comprehensive context for interpreting literacy performance results.

In addition an oral language interview will be administered both to persons who cannot perform basic reading and writing tasks and to a random sample of those who can. There are two parts. Part I is designed to determine the effectiveness of selected groups in using spoken English. Part II is concerned with obtaining information dealing with their familiarity and understanding of various literacy artifacts.

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The major thrust of the assessment is the broad range of simulation tasks that will be used to profile strengths and weaknesses. In developing those tasks an information processing model that includes reading, writing, speaking, and listening is assumed. A task is seen as consisting of two elements: the material or linguistic form in which information is printed and the second is use or purpose for which an individual interacts with the material. Thirteen categories of material crossed with five use categories provide a basis for a diverse set of literacy tasks. Rather than a series of multiple-choice questions, respondents are presented with a set of tasks that simulate literacy behaviors across a range of situations. These tasks are designed to assess various levels of processing printed information that include recognizing, acquiring, organizing, interpreting and applying information.

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